AMENDMENTS TO THE SPECIFICATION:

Please amend the heading beginning at page 1, line 4, as follows:

BACKGROUND AND SUMMARY ~~OF THE INVENTION~~

Please amend the paragraph beginning at page 3, line 15, as follows:

[0007] A second solution is to multiplex mobile stations located in the same beam-sector on the same timeslot and frequency. A beam-sector is the cell area covered by a narrow antenna beam. Since many mobile stations have the ability to transmit and receive over multiple time slots, it will be difficult to multiplex mobile stations located in the same beam-sector on the same timeslot and frequency. One extreme example that illustrates this drawback is five, 3-slot mobile stations located in different beam-sectors which are assigned on 8 packet data channels in the downlink. If the mobiles can only be assigned to channels where mobiles located in the same beam resided, the system would quickly run out of timeslots. ~~On~~ One mobile may be assigned less than 3 timeslots and another mobile perhaps no timeslots since they otherwise would be assigned on channels used by mobiles in other beams.

Please amend he paragraph beginning at page 4, line 22, as follows:

[0011] The present invention technology described below overcomes these problems associated with beam conflicts. In a radio network that employs multiple antennas, an amount of information to be transmitted in an uplink direction by a mobile station to the radio network is determined. If the amount of uplink information is less than a predetermined value, a permission to transmit a first amount of information is sent to the mobile. If the amount of uplink information is equal to or exceeds the predetermined value, permission to transmit a second amount of information greater than the first amount is sent to the mobile. The permission to transmit may be a flag, and in an example EGPRS application, may be an uplink state flag (USF).

Please amend the paragraph beginning at page 5, line 13, as follows:

[0013] Another ~~aspect of the present invention~~technical feature, which may be used alone, ~~but it~~ is preferably used together with the adaptive granularity featured described above. First information having a first amount or level of coding, such as FEC (Forward Error Correction), is to be transmitted in a downlink direction to a first mobile station associated with a first antenna beam. Second information having less coding than the first information is to be transmitted to a second mobile station associated with a second antenna beam. The first information and second information are combined in a data block. The data block is transmitted in the second antenna beam. The first information, being more extensively coded, is reasonably likely to be accurately decoded at the first mobile station even though it is transmitted on the second antenna beam rather than the first antenna beam. Again, in one example application, the first information is a permission to transmit in the uplink and the second information is payload data.

Please amend the paragraph beginning at page 6, line 4, as follows:

[0015] In another, less-preferred, alternative example embodiment for dealing with beam conflict situations, the first information associated with a first mobile and first antenna beam is combined with "dummy" second information into a first data unit. The first data unit is transmitted to the first mobile station using the first antenna beam. Similarly, the second information may be combined with "dummy" first information into a second data unit. The second data unit associated with a second mobile and second antenna beam is transmitted to the second mobile station using the second antenna beam.

Please amend the paragraphing beginning at page 6, line 11:

[0016] ~~The present invention~~This technology is particularly useful in high traffic load situations. In these situations, achieving maximum interference reduction through optimal adaptive antenna performance is particularly important. By minimizing beam conflict situations and handling beam conflicts efficiently, ~~the present invention achieves~~ excellent adaptive antenna performance is achieved.

Please amend the paragraph beginning at page 6, line 17, as follows:

[0017] Various objects and advantages ~~of the invention~~ will be understood by reading the detailed description in conjunction with the drawings in which:

Please amend the paragraph beginning at page 6, line 23, as follows:

[0020] Figure 1C illustrates sending a USF addressed to mobile MS2 giving it permission to transmit on the uplink;

Please amend the paragraph beginning at page 7, line 20, as follows:

[0032] The ~~present invention~~ technology described below is directed to data transmission networks which implement adaptive antennas and in the following description, for purposes of explanation and not limitation, specific details are set forth in order to provide a thorough understanding ~~of the present invention~~. But it will be apparent to one skilled in the art that ~~the present invention may be practiced using~~ other embodiments that depart from these specific details may be used. In other instances, detailed descriptions of well-known methods, protocols, devices, and circuits are omitted so it is not to obscure the description ~~of the present invention~~.

Please amend the paragraph beginning at page 8, line 1, as follows:

[0033] Figure 4 illustrates ~~a~~an example communication system 10 ~~in which the present invention may be advantageously employed~~. One or more networks, such as the Internet, represented by a cloud 12 is (are) coupled to one or more packet network control nodes 13, e.g., an SGSN and a GGSN in the well-known GPRS network. The packet network control 13 is coupled to a base station controller (BSC) 14, which in turn, is coupled to one or more base stations (BS) 24. One of the base stations 24 includes an adaptive antenna system illustrated by three adaptive, narrow antenna beams B1, B2, and B3. The adaptive antenna system (e.g., an adaptive antenna array) is coupled to transceiving circuitry 28 in the base station 24. The channel controller 26 controls the transceiving circuitry and selection/activation of a particular

antenna beam. The selection of information to be transmitted over a particular beam is performed in this example by a control unit in the BSC 14, i.e., RLC/MAC blocks are constructed by that control unit and forwarded to the base station. Various mobile stations (MS) 30a-30e are shown in various antenna beams B1, B2, and B3.

Please amend the paragraph beginning at page 10, line 1, as follows:

[0038] But there still needs to be an appropriate methodology for handling beam conflicts when they do occur. A preferred approach for handling beam conflicts is now described. A data block containing a UTP flag intended for a first mobile and payload data intended for a second mobile located at a different antenna beam is transmitted in the antenna beam directed to the data mobile~~;~~, i.e., the second mobile in this case. The data mobile antenna beam is selected because the UTP coding is usually more robust than payload data coding.

Please amend the paragraph beginning at page 13, line 18, as follows:

[0049] ~~The present invention~~This technology decreases retransmissions caused by sending information to two mobile stations located in different parts of a cell served by multiple antenna beams. Decreased retransmissions mean increased data throughput and reduced delay. Use of adaptive antennas further decreases interference in other cells. The ~~present invention~~technology is particularly useful in high traffic load situations. In these situations, achieving maximum interference reduction through optimal adaptive antenna performance is particularly important. Although well-suited for GPRS and EGPRS based systems, the ~~present invention~~technology may be employed in any other cellular system where information is to be sent to spacially-separated mobiles using multiple antenna beams. Although the processing and decisions described above took place in the base station controller, they may also be implemented in the base station or in some other node if desired.

Please amend the paragraph beginning at page 14, line 1, as follows:

[0050] ~~The invention has been described in connection with what is presently considered to be the most practical and preferred embodiment~~Practical example embodiments have been described. The invention is not to be limited to the disclosed ~~embodiment~~example embodiments, but on the contrary, is intended to cover various modifications and equivalent arrangements included within the spirit and scope of the appended claims. For example, the ~~invention~~technology described may be used with any antenna system where beam conflicts may arise.